

Attachment 5

*Proposed Wireless
Telecommunications Facility*

CT-174

4 Dittmar Road
Redding, Connecticut

Prepared for



Prepared by **VHB/Vanasse Hangen Brustlin, Inc.**
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December 2011

Visual Resource Evaluation

Message Center Management (MCM) seeks approval from the Connecticut Siting Council for a Certificate of Environmental Compatibility and Public Need to replace an existing wireless telecommunications facility ("Facility") on property at 4 Dittmar Road ("Host Property") in the town of Redding, Connecticut. The new Facility would replace an existing 110-foot tall guyed tower with a 127-foot tall monopine. Currently, T-Mobile is the lead carrier on the existing guyed tower. This Visual Resource Evaluation was conducted to approximate the visibility of the proposed Facility within a two-mile radius of the Site ("Study Area"). Attachment A contains a map that depicts the location of the proposed Facility and the limits of the Study Area.

Project Introduction

The existing telecommunications facility includes a 110-foot tall guyed tower (scheduled to be removed) and associated ground equipment located within a fenced compound. The proposed replacement Facility would include a 120-foot tall stealth monopole, designed to simulate a pine tree (with an overall height of 127 feet above AGL in order to accommodate a tapered branching pattern). The monopine would be situated in the same location as the existing guyed tower. The T-Mobile antennas from the existing guyed tower would be relocated onto the proposed replacement tower at a center line height of 120 feet above ground level AGL. The Facility would also accommodate additional antenna arrays below 120 feet for future service provider needs. The antenna arrays would be camouflaged within the branch pattern of the monopine. The existing compound area would be expanded to accommodate the replacement tower and ground equipment. Evergreen vegetation would be planted along the eastern, southern and western perimeter of the expanded compound in order to provide screening for the proposed ground equipment. Based on information provided by the project engineer, All-Points Technology Corporation, P.C, the proposed Facility would be located at approximately 806 feet above mean sea level (AMSL). Access to the proposed Facility would utilize an existing dirt driveway currently located on the Host Property.

Site Description and Setting

Identified in the Town of Redding Tax Assessor's records as Map 1/ Lot 10, the Host Property consists of approximately 5.6 acres of land and is currently occupied by a single-family residence and the existing telecommunications installation described above. Land use within the general vicinity of the Host Property consists primarily of medium-density residential development and undeveloped woodlands. In total, the Study Area features approximately 60 linear miles of roadways, including portions of State Routes 53, 58 and 107.

The topography within the Study Area is characterized by rolling hills with ground elevations that range from approximately 367 feet AMSL to approximately 844 feet AMSL. The Study Area contains approximately 114 acres of surface water, including Sympaug Pond and the Chestnut Ridge Reservoir located roughly 1.5-miles and 0.50-mile northwest of the host property, respectively. The tree cover within the Study Area consists of mixed deciduous

hardwood species interspersed with stands of mature evergreens and occupies approximately 6,461 acres of the 8,042-acre study area (80%). During the in-field activities associated with this analysis, a laser range finder was used to determine the average tree canopy height throughout the Study Area. Numerous trees were selected for measurement and the average tree canopy was determined to be 65 feet.

METHODOLOGY

To evaluate the visibility associated with the proposed Facility, VHB used the combination of a predictive computer model and in-field analysis. The predictive model provided a preliminary assessment of potential visibility throughout the entire study area, including private property and other areas inaccessible for direct observations. A “balloon float” and Study Area reconnaissance were subsequently conducted for field verification to back-check the initial computer modeling results, to obtain location and height representations, and to provide photographic documentation from publicly accessible areas. A description of the procedures used in the analysis is provided below.

Visibility Analysis

VHB uses ArcGIS® Spatial Analyst, a computer modeling tool developed by Environmental Systems Research Institute, Inc., to calculate the areas from which at least the top of the proposed Facility is expected to be visible. Project- and Study Area-specific data were incorporated into the computer model, including Facility height, its ground elevation, underlying and surrounding topography and existing vegetation. Information used in the model included Connecticut LiDAR¹-based digital elevation data and a digital forest (or tree canopy) layer developed for the Study Area. The LiDAR-based Digital Elevation Model (DEM) represents ten-foot spatial resolution elevation information for the state of Connecticut that was derived through the spatial interpolation of airborne LiDAR-based data collected in the year 2000 and has a horizontal resolution of ten (10) feet. The LiDAR-based data was edited in 2007 made available by the University of Connecticut through its Center for Land Use Education and Research (CLEAR). To create the forest layer, mature trees and woodland areas depicted on aerial photographs (ranging in dates from 2004 to 2008) were manually digitized (hand traced) in ArcGIS®, creating a geographic data layer for inclusion in the computer model. The black and white, digital aerial photographs, obtained from the Connecticut Department of Transportation, were flown in the spring of 2004 and selected for use in this analysis because of their image quality and depiction of pre-leaf emergence (i.e., “leaf-off”) conditions. These photographs are half-foot pixel resolution. The more recent aerial photographs (2006 and 2008) were overlaid and evaluated to identify any new development resulting in the removal of trees and construction of new homes.

Once the specific data layers were entered, the ArcGIS® Spatial Analyst Viewshed tool was applied to achieve an estimate of locations where the proposed Facility could be visible. First,

¹ LiDAR is an acronym for Light Detection and Ranging. It is a technology that utilized lasers to determine the distance to an object or surface. LiDAR is similar to radar, but incorporates laser pulses rather than sound waves. It measures the time delay between transmission and reflection of the laser pulse.

only topography was used as a possible visual constraint; the tree canopy was omitted to evaluate potential visibility with no intervening vegetative screening. The initial omission of this data layer resulted in an excessively conservative prediction, but it provided an opportunity to identify areas within potential direct lines of sight of the Facility.

The forest data layer was then overlaid and built into the DEM, using a conservative average tree canopy height of 50 feet, to establish a baseline assessment of intervening vegetation. The resultant preliminary viewshed map was used during the in-field activities (described further below) to compare the outcome of the initial computer modeling with observations of the balloon float to identify any significant deviations that may have occurred due to land use changes. Information obtained from the field reconnaissance was ultimately incorporated into the model to refine the viewshed map.

The average tree canopy height was also refined based on information collected in the field using a combination of a hand-held laser range finder, clinometer and comparative observations. The revised average tree canopy height, in this case 65 feet, was then incorporated into the model and the results displayed on the viewshed map. The forested areas were overlaid on the DEM with a height of 65 feet added to the base elevation and the visibility from within the Study Area calculated.

As a final step, the forested areas were extracted from the areas of visibility, using a conservative assumption that a person standing within the forest will not be able to view the proposed Facility beyond a distance of approximately 500 feet. Depending on the density of the intervening tree canopy and understory of the surrounding woodlands, it is assumed that some locations within this distance could provide visibility of at least portions of the proposed Facility at any time of the year. In "leaf-on" conditions, this distance may be overly conservative for most locations. However, for purposes of this analysis, it was reasoned that forested land beyond 500 feet of the proposed Facility would consist of light-impenetrable trees of a uniform height.

Also included on the map is a data layer, obtained from the State of Connecticut Department of Environmental Protection ("CTDEP"), which depicts various land and water resources such as parks and forests, recreational facilities, dedicated open space, CTDEP boat launches and other categories. Lastly, based on a review of information published by the Connecticut Department of Transportation (ConnDOT) and discussions with municipal officials in Redding, it was determined that John Read Road, located approximately one mile to the southeast of the proposed Facility, is a locally-designated scenic road.

Balloon Float and Study Area Reconnaissance

Vanasse Hangen Brustlin Inc., (VHB) conducted a balloon float at the proposed Facility site on April 7, 2011 to further evaluate the potential viewshed within the Study Area. The balloon float consisted of raising and maintaining an approximate four-foot diameter, helium-filled weather balloon adjacent to the proposed site location (approximately 40 feet east of the existing tower to avoid any potential damage to the antennas) at a height of 120 feet AGL. Once the balloon was secured, VHB staff conducted a drive-by reconnaissance along the roads

located within the Study Area to evaluate the results of the preliminary viewshed map and to document where the existing tower and/or balloon were, and were not, visible above and/or through the tree canopy. VHB staff also walked portions of Putnam Memorial State Park located roughly 0.25-mile to the east of the Host Property and portions of the Plishner Wildlife Preserve located within approximately 500 feet to the east. During the balloon float, the temperature was approximately 55 degrees Fahrenheit with calm wind conditions and partly sunny skies.

Photographic Documentation

During the balloon float, VHB personnel drove the public road system to inventory those areas where the existing tower/balloon was and was not visible. In addition, as noted above, VHB staff also walked portions of Putnam Memorial State Park and the Plishner Wildlife Preserve. VHB obtained photographs from several vantage points to document the actual view towards the proposed Facility. Several locations where neither the existing tower nor the balloon were visible are also included. The locations of the photos are described below:

View	Location	Orientation	Dist. To Site	Visibility
1	Adjacent to #4 Bartram Drive	Northeast	± 0.12-Mile	Seasonal
2	Adjacent to #10 Bartram Drive	North	± 0.11-Mile	Seasonal
3	Adjacent to #15 Bartram Drive	Northwest	± 0.09-Mile	Seasonal
4	End of Bartram Drive	Northwest	± 0.10-Mile	Seasonal
5	Adjacent to #17 Dittmar Road	Southeast	± 0.11-Mile	Seasonal
6	Dittmar Road at host property	Southeast	± 0.08-Mile	Year-Round
7	Dittmar Road adjacent to existing site access drive	Northeast	± 0.08-Mile	Year-Round
8	Intersection of Dittmar Road and Lonetown Road	Northeast	± 0.11-Mile	Seasonal
9	Adjacent to #235 Lonetown Road	Northeast	± 0.11-Mile	Year-Round
10	Plishner Preserve Trail	Northwest	± 0.10-Mile	Seasonal
11	Plishner Preserve Trail	West	± 0.11-Mile	Not Visible
12	Putnam Memorial State Park (adjacent to Youth Group Area 3)	Northwest	± 0.43-Mile	Seasonal
13	Putnam Memorial State Park at memorial monument	Northwest	± 0.50-Mile	Not Visible
14	End of Sunnyview Drive	Northwest	± 1.47-Mile	Not Visible
15	John Read Road	Northwest	± 1.22-Mile	Not Visible
16	Intersection of Lonetown Road and Putnam Park Road	North	± 0.72-Mile	Not Visible
17	Adjacent to #196 Lonetown Road	North	± 0.45-Mile	Not Visible

Photographs of the balloon from the view points listed above were taken with a Nikon D-80 digital camera body and Nikon 18 to 135 mm zoom lens. For the purposes of this report, the lens was set to 50mm. "The lens that most closely approximates the view of the unaided human eye is known as the normal focal-length lens. For the 35 mm camera format, which gives a 24x36 mm image, the normal focal length is about 50 mm.² "

² Warren, Bruce. Photography, West Publishing Company, Eagan, MN, c. 1993, (page 70).

The locations of the photographic points are recorded in the field using a hand-held GPS receiver and are subsequently plotted on the maps contained in the attachments to this document.

Photographic Simulation

Photographic simulations were generated for the eleven visible locations documented during the in-field activities. The photographic simulations portray a scaled rendering of a representative monopine from these locations. Using field data, site plan information and 3-dimension (3D) modeling software, a spatially referenced model of the site area and Facility was generated. Geographic coordinates (latitude and longitude) were collected in the field for all of the photograph locations via GPS and later used to generate virtual camera positions within the spatial 3D model. Photo simulations were then created using a combination of renderings generated in the 3D model and photo rendering software programs. Photographs of the balloon from those locations are included to provide a visual marker and cross-reference of the height and proportions of the proposed Facility. Most of the photographs also include the existing tower which also serves as a visual marker. A photolog map, the balloon photos and associated simulations are contained in Attachment A.



CONCLUSIONS

Based on this analysis, areas from where the proposed 127-foot tall monopine would be visible above the tree canopy comprise approximately 17 acres, or less than one percent of the 8,042-acre Study Area. Attachment B contains two viewshed analysis maps. One map depicts visibility throughout the full extent of the Study Area and uses USGS topographic maps as its base. The other map depicts visibility within the immediate vicinity of the proposed Facility and has a base map comprised of 2004 aerial photography in order to provide greater detail within a localized area. As depicted on the attached viewshed maps, the majority of year-round visibility associated with proposed replacement tower would occur on and/or immediately adjacent to the Host Property (see Views 6, 7 and 9 and the aerial photo map). The viewshed map depicts additional areas of anticipated year-round visibility on hilltops further south, southwest and southeast of the proposed Facility. Since these areas are located on private properties, they could not be evaluated further by VHB field personnel during the April 7th balloon float. However, we anticipate that views of the Facility from these locations would be limited to the upper portions of the monopine. VHB estimates that at least partial year-round views may be achieved from portions of five residential properties located within

Note: Focal lengths ranging from 17 mm to 50 mm can approximate views similar to that achieved from the unaided human eye. Two key factors to consider when determining what specific focal length to use to best represent "real world" conditions is field of view and relation of sizes between objects in the frame. A 17 mm focal length has a wider field of view, which is more representative of the overall extent (including peripheral vision) that the human eye typically sees. At this focal length, relation of sizes between objects is skewed and not entirely accurate to what the human eye experiences. A 50 mm focal length has a narrower field of view than that of the human eye; however, the relation of sizes between objects is more representative to that of what the human eye perceives. When producing photographic simulations, VHB has chosen to use a 50 mm focal length whenever possible. For presentation purposes, such as in this report, the photographs are produced and viewed in an approximate 6.5" by 9.5" format. VHB has determined that when viewing a proposed facility at this format size, it is important to provide the largest representational image while maintaining an accurate relation of sizes between objects within the frame of the photograph.

the Study Area. The locations of these properties are summarized in the table below. Overall, potential year-round views of the proposed Facility would be limited to the areas described above by a combination of its relatively low height and the intervening topography and vegetation contained within the Study Area. The design of the monopine would also act to conceal the associated antennas and tower structure and would therefore enable the Facility to blend in with the existing vegetation on and adjacent to the Host Property. Moreover, as evidenced by the in-field reconnaissance, the proposed 127-foot tall monopine would not represent a substantial increase in year-round visibility in comparison to the existing 110-foot tall guyed tower. This is further evidenced by the attached photographic documentation and simulations as the existing guyed towered is featured in the majority of these views.

The viewshed map also depicts several additional areas where seasonal (i.e. during “leaf off” conditions) views are anticipated. These areas comprise approximately 34 acres and are located within the immediate vicinity of the Host Property, including limited portions of Putnam Memorial State Park (View 12) and the Plishner Wildlife Preserve (View 10). No views are anticipated from John Read Road.

VHB estimates that limited seasonal views of the proposed replacement tower would be achieved from portions of approximately ten additional residential properties, the locations of which are provided in the table below. Again, it is important to note that monopine design of the proposed Facility will provide significant camouflaging, particularly among areas of potential seasonal visibility where any views of the structure would be achieved through intervening vegetation.

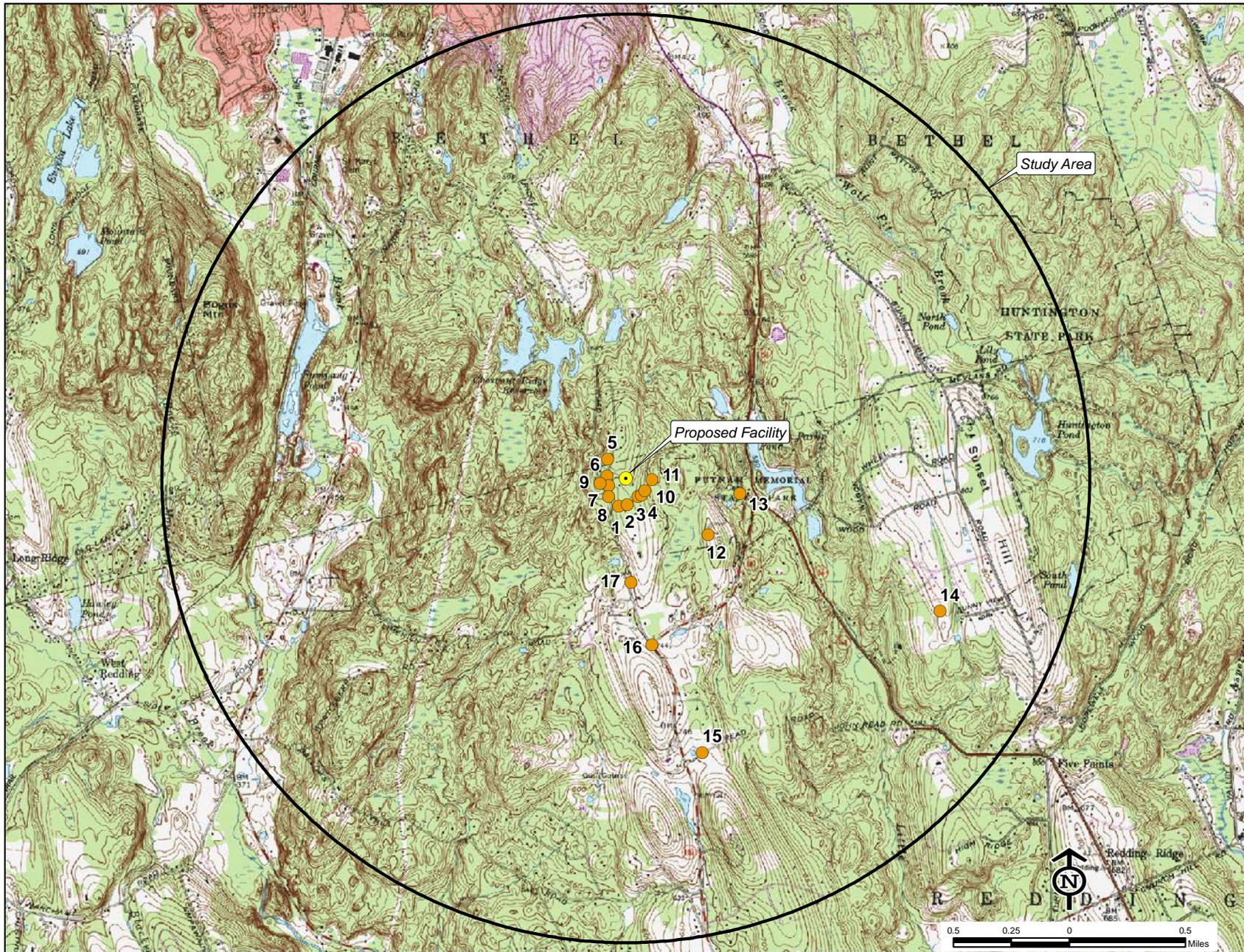
Location	*Number of Residential Properties With Potential Year-Round Visibility (Leaf-On)	*Number of Residential Properties With Potential Seasonal Visibility (Leaf-Off)
Bartram Drive	2	4
Dittmar Drive	2	4
Lonetown Road	1	2
TOTAL:	5	10

*Indicates potential year-round or seasonal visibility from portions of “residential” properties. For purposes of this analysis, the term “residential” property may include undeveloped or agricultural land, forested tracts with some clearing, and/or parcels with non-residential structures. Potential visibility on a residential property does not necessarily mean that views would be achieved from within residential dwellings, exterior decks, porches or patios that might be located on such properties. Further, it may be possible to view the Facility from within portions of the shaded areas indicating potential visibility, but not necessarily from all locations within those shaded areas.

Attachment A

Photolog Documentation Map, Balloon Float Photographs and Photographic Simulations

PHOTOLOG MAP



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PHOTOGRAPHIC DOCUMENTATION



EXISTING TELECOMMUNICATIONS FACILITY

VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
1	ADJACENT TO #4 BARTRAM DRIVE	NORTHEAST	0.12 MILE +/-	SEASONAL



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VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
1	ADJACENT TO #4 BARTRAM DRIVE	NORTHEAST	0.12 MILE +/-	SEASONAL



PHOTOGRAPHIC DOCUMENTATION



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VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
2	ADJACENT TO #10 BARTRAM DRIVE	NORTH	0.11 MILE +/-	SEASONAL



PHOTOGRAPHIC SIMULATION



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VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
2	ADJACENT TO #10 BARTRAM DRIVE	NORTH	0.11 MILE +/-	SEASONAL



PHOTOGRAPHIC DOCUMENTATION



EXISTING TELECOMMUNICATIONS FACILITY



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VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
3	ADJACENT TO #15 BARTRAM DRIVE	NORTHWEST	0.09 MILE +/-	SEASONAL



PHOTOGRAPHIC SIMULATION



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VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
3	ADJACENT TO #15 BARTRAM DRIVE	NORTHWEST	0.09 MILE +/-	SEASONAL



PHOTOGRAPHIC DOCUMENTATION



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VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
4	END OF BARTRAM DRIVE	NORTHWEST	0.10 MILE +/-	SEASONAL





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VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
4	END OF BARTRAM DRIVE	NORTHWEST	0.10 MILE +/-	SEASONAL



PHOTOGRAPHIC DOCUMENTATION



VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	ADJACENT TO #17 DITTMAR ROAD	SOUTHEAST	0.11 MILE +/-	SEASONAL

PHOTOGRAPHIC SIMULATION



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VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	ADJACENT TO #17 DITTMAR ROAD	SOUTHEAST	0.11 MILE +/-	SEASONAL



PHOTOGRAPHIC DOCUMENTATION



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VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
6	DITTMAR ROAD AT HOST PROPERTY	SOUTHEAST	0.08 MILE +/-	YEAR-ROUND





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VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
6	DITTMAR ROAD AT HOST PROPERTY	SOUTHEAST	0.08 MILE +/-	YEAR-ROUND



PHOTOGRAPHIC DOCUMENTATION



EXISTING TELECOMMUNICATIONS FACILITY

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VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
7	DITTMAR ROAD ADJACENT TO EXISTING SITE ACCESS DRIVE	NORTHEAST	0.08 MILE +/-	YEAR-ROUND



PHOTOGRAPHIC SIMULATION



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VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
7	DITTMAR ROAD ADJACENT TO EXISTING SITE ACCESS DRIVE	NORTHEAST	0.08 MILE +/-	YEAR-ROUND



PHOTOGRAPHIC DOCUMENTATION



VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
8	INTERSECTION OF DITTMAR ROAD AND LONETOWN ROAD	NORTHEAST	0.11 MILE +/-	SEASONAL

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PHOTOGRAPHIC SIMULATION



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VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
8	INTERSECTION OF DITTMAR ROAD AND LONETOWN ROAD	NORTHEAST	0.11 MILE +/-	SEASONAL



PHOTOGRAPHIC DOCUMENTATION



EXISTING TELECOMMUNICATIONS FACILITY

VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
9	ADJACENT TO #235 LONETOWN ROAD	NORTHEAST	0.11 MILE +/-	YEAR-ROUND



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VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
9	ADJACENT TO #235 LONETOWN ROAD	NORTHEAST	0.11 MILE +/-	YEAR-ROUND



PHOTOGRAPHIC DOCUMENTATION



VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
10	PLISHNER PRESERVE TRAIL	NORTHWEST	0.10 MILE +/-	SEASONAL

PHOTOGRAPHIC SIMULATION



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VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
10	PLISHNER PRESERVE TRAIL	NORTHWEST	0.10 MILE +/-	SEASONAL



PHOTOGRAPHIC DOCUMENTATION



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VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
11	PLISHNER PRESERVE TRAIL	WEST	0.11 MILE +/-	NOT VISIBLE



PHOTOGRAPHIC DOCUMENTATION



VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
12	PUTNAM MEMORIAL STATE PARK (adjacent to Youth Group Area 3)	NORTHWEST	0.43 MILE +/-	SEASONAL

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ct:\mdata\41245.02\graphics\FIGURES\41245.02_Photosim

VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
12	PUTNAM MEMORIAL STATE PARK (adjacent to Youth Group Area 3)	NORTHWEST	0.43 MILE +/-	SEASONAL



PHOTOGRAPHIC DOCUMENTATION



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VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
13	PUTNAM MEMORIAL STATE PARK AT MEMORIAL MONUMENT	NORTHWEST	0.50 MILE +/-	NOT VISIBLE



PHOTOGRAPHIC DOCUMENTATION



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VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
14	END OF SUNNYVIEW DRIVE	NORTHWEST	1.47 MILES +/-	NOT VISIBLE



PHOTOGRAPHIC DOCUMENTATION



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VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
15	JOHN READ ROAD	NORTHWEST	1.22 MILES +/-	NOT VISIBLE





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VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
16	INTERSECTION OF LONETOWN ROAD AND PUTNAM PARK ROAD	NORTH	0.72 MILE +/-	NOT VISIBLE



PHOTOGRAPHIC DOCUMENTATION



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VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
17	ADJACENT TO #196 LONETOWN ROAD	NORTH	0.45 MILE +/-	NOT VISIBLE



Attachment B

Viewshed Maps

*Viewshed Analysis Map
Proposed MCM Wireless
Telecommunications Facility
4 Dittmar Road
Redding, Connecticut*

NOTE:

- Viewshed analysis conducted using ESRI's Spatial Analyst.
- Proposed facility height is 127 feet.
- Existing tree canopy height estimated at 65 feet.
- Study Area is comprised of a two-mile radius surrounding the proposed facility and includes 8,042 acres of land.
- Results field verified by balloon float.

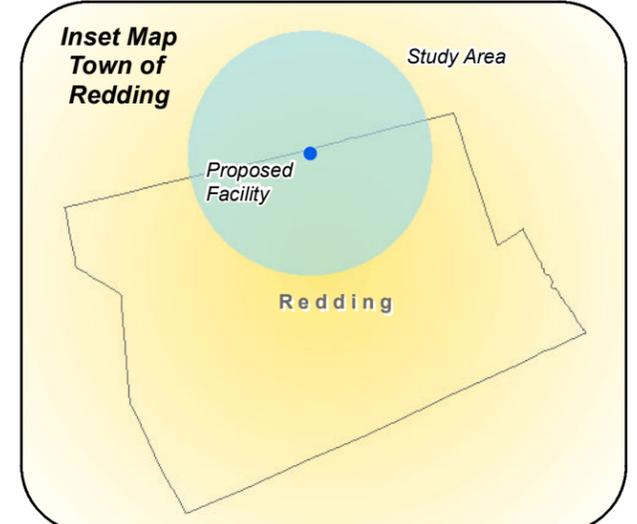
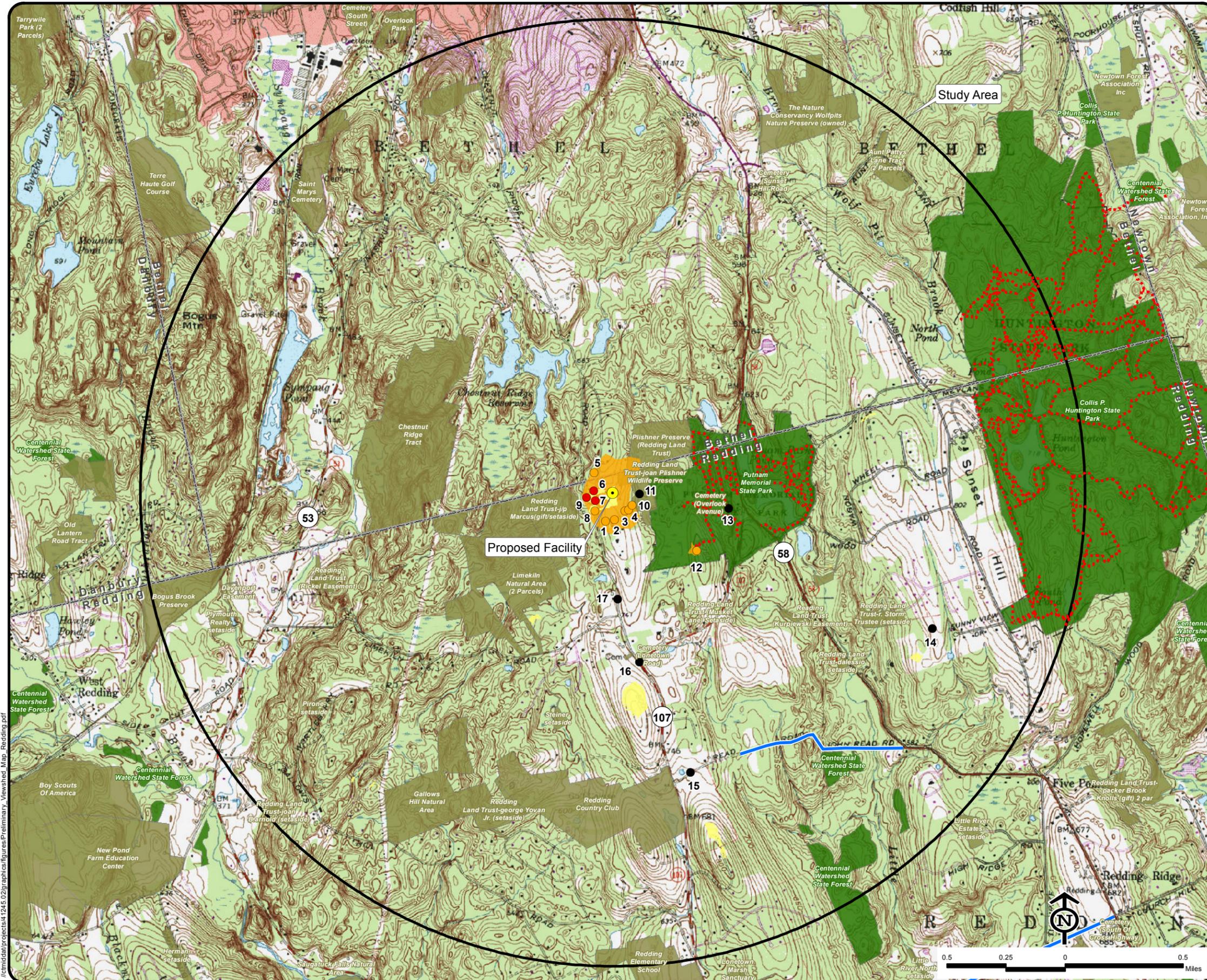
DATA SOURCES:

- Digital elevation model (DEM) derived from Connecticut LiDAR-based Digital Elevation Data (collected in 2000) with a 10-foot spatial resolution produced by the University of Connecticut and the Center for Land Use Education and Research (CLEAR); 2007
- Forest areas derived from 2004, 2006 and 2008 digital orthophotos with 0.5-foot, 1-foot and 1-meter pixel resolution, respectively; digitized by VHB, 2011
- Base map comprised of Bethel (1984) and Bostford (1984) USGS Quadrangle Maps
- Municipal and Private Open Space data layer provided by CT DEP, 1997
- Federal Open Space data layer provided by CT DEP, 2004
- CT DEP Property data layer provided by CT DEP, December 2010
- CT DEP boat launches data layer provided by CT DEP, Dec 2008
- Scenic Roads layer derived from available State and Local listings

Map Compiled December, 2011

Legend

- Proposed Tower Location
 - CT DEP Property (CT DEP, May 2010)
 - State Forest
 - State Park
 - DEP Owned Waterbody
 - State Park Scenic Reserve
 - Historic Preserve
 - Natural Area Preserve
 - Fish Hatchery
 - Flood Control
 - Other
 - State Park Trail
 - Water Access
 - Wildlife Area
 - Wildlife Sanctuary
 - Federal Open Space (CT DEP, 2004)
 - Boat Launches (CT DEP, Dec 2009)
 - Scenic Road (State and Local)
 - Trails (CT DEP)
 - Town Line
- Photographs - April 7, 2011
- Balloon is not visible
 - Balloon visible through trees
 - Balloon visible above trees
- Year-Round Visibility (Approximately 17 acres)
 - Seasonal Visibility Area (Approximately 34 acres)
- Protected Municipal and Private Open Space (CT DEP, 1997)
 - Cemetery
 - Preservation
 - Conservation
 - Existing Preserved Open Space
 - Recreation
 - General Recreation
 - School
 - Uncategorized



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Viewshed Analysis Map - Aerial Photograph
Proposed MCM Wireless
Telecommunications Facility
4 Dittmar Road
Redding, Connecticut

NOTE:

- Viewshed analysis conducted using ESRI's Spatial Analyst.
- Proposed facility height is 127 feet.
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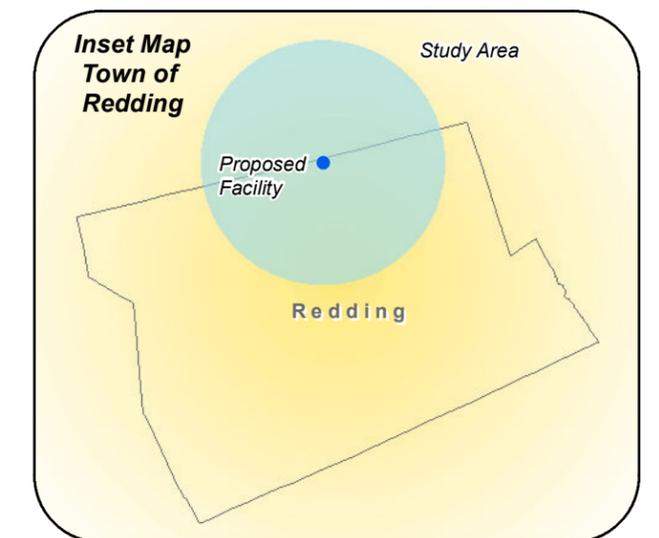
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- Municipal and Private Open Space data layer provided by CT DEP, 1997
- Federal Open Space data layer provided by CT DEP, 2004
- CT DEP Property data layer provided by CT DEP, December 2010
- CT DEP boat launches data layer provided by CT DEP, Dec 2008
- Scenic Roads layer derived from available State and Local listings

Map Compiled December, 2011

Legend

- | | |
|---|---|
|  Proposed Tower Location |  CT DEP Property (CT DEP, May 2010) |
| Photographs - April 7, 2011 | |
|  Balloon is not visible | State Forest |
|  Balloon visible through trees | State Park |
|  Balloon visible above trees | DEP Owned Waterbody |
|  Year-Round Visibility (Approximately 17 acres) | State Park Scenic Reserve |
|  Seasonal Visibility Area (Approximately 34 acres) | Historic Preserve |
|  Protected Municipal and Private Open Space (CT DEP, 1997) | Natural Area Preserve |
| Cemetery | Fish Hatchery |
| Preservation | Flood Control |
| Conservation | Other |
| Existing Preserved Open Space | State Park Trail |
| Recreation | Water Access |
| General Recreation | Wildlife Area |
| School | Wildlife Sanctuary |
| Uncategorized |  Federal Open Space (CT DEP, 2004) |
| |  Parcels |
| |  Boat Launches (CT DEP, Dec 2009) |
| |  Scenic Road (State and Local) |
| |  Trails (CT DEP) |
| |  Town Line |



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